

Source Water Assessment Report



Public Water Supply: WICHITA, CITY OF

**Assessment Areas Include:
71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81**



Kansas Department of Health and Environment
Bureau of Water Watershed Management Section
1000 SW Jackson St., Suite 420
Topeka, KS 66612-1367



Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114



Kansas Geological Survey University of Kansas
1930 Constant Ave.
Lawrence, KS 66047

Reports were generated with the Automated Source Water Assessment Tool (ASWAT). Assessments were completed online using ASWAT by hundreds of state employees, public water supply staff, and technical assistant providers throughout the State of Kansas.

Table Of Contents

<u>Report Description</u>	
<u>Assessment Area 71</u>	<u>1.0</u>
<u>Executive Summary</u>	<u>1.1</u>
<u>Potential Sources</u>	<u>1.2</u>
<u>Added Sources</u>	<u>1.3</u>
<u>Potential Contaminants Summary</u>	<u>1.4</u>
<u>Potential Contaminants Listing</u>	<u>1.5</u>
<u>Protection Measures</u>	<u>1.6</u>
<u>Assessment Analysis</u>	<u>1.7</u>
<u>Site Comments</u>	<u>1.8</u>
<u>Added Site Comments</u>	<u>1.9</u>
<u>Analysis Question Comments</u>	<u>1.10</u>
<u>Assessment Area 72</u>	<u>2.0</u>
<u>Executive Summary</u>	<u>2.1</u>
<u>Potential Sources</u>	<u>2.2</u>
<u>Added Sources</u>	<u>2.3</u>
<u>Potential Contaminants Summary</u>	<u>2.4</u>
<u>Potential Contaminants Listing</u>	<u>2.5</u>
<u>Protection Measures</u>	<u>2.6</u>
<u>Assessment Analysis</u>	<u>2.7</u>
<u>Site Comments</u>	<u>2.8</u>
<u>Added Site Comments</u>	<u>2.9</u>
<u>Analysis Question Comments</u>	<u>2.10</u>
<u>Assessment Area 73</u>	<u>3.0</u>
<u>Executive Summary</u>	<u>3.1</u>
<u>Potential Sources</u>	<u>3.2</u>
<u>Added Sources</u>	<u>3.3</u>
<u>Potential Contaminants Summary</u>	<u>3.4</u>
<u>Potential Contaminants Listing</u>	<u>3.5</u>
<u>Protection Measures</u>	<u>3.6</u>
<u>Assessment Analysis</u>	<u>3.7</u>
<u>Site Comments</u>	<u>3.8</u>
<u>Added Site Comments</u>	<u>3.9</u>
<u>Analysis Question Comments</u>	<u>3.10</u>

<u>Assessment Area 74</u>	<u>4.0</u>
<u>Executive Summary</u>	<u>4.1</u>
<u>Potential Sources</u>	<u>4.2</u>
<u>Added Sources</u>	<u>4.3</u>
<u>Potential Contaminants Summary</u>	<u>4.4</u>
<u>Potential Contaminants Listing</u>	<u>4.5</u>
<u>Protection Measures</u>	<u>4.6</u>
<u>Assessment Analysis</u>	<u>4.7</u>
<u>Site Comments</u>	<u>4.8</u>
<u>Added Site Comments</u>	<u>4.9</u>
<u>Analysis Question Comments</u>	<u>4.10</u>
<u>Assessment Area 75</u>	<u>5.0</u>
<u>Executive Summary</u>	<u>5.1</u>
<u>Potential Sources</u>	<u>5.2</u>
<u>Added Sources</u>	<u>5.3</u>
<u>Potential Contaminants Summary</u>	<u>5.4</u>
<u>Potential Contaminants Listing</u>	<u>5.5</u>
<u>Protection Measures</u>	<u>5.6</u>
<u>Assessment Analysis</u>	<u>5.7</u>
<u>Site Comments</u>	<u>5.8</u>
<u>Added Site Comments</u>	<u>5.9</u>
<u>Analysis Question Comments</u>	<u>5.10</u>
<u>Assessment Area 76</u>	<u>6.0</u>
<u>Executive Summary</u>	<u>6.1</u>
<u>Potential Sources</u>	<u>6.2</u>
<u>Added Sources</u>	<u>6.3</u>
<u>Potential Contaminants Summary</u>	<u>6.4</u>
<u>Potential Contaminants Listing</u>	<u>6.5</u>
<u>Protection Measures</u>	<u>6.6</u>
<u>Assessment Analysis</u>	<u>6.7</u>
<u>Site Comments</u>	<u>6.8</u>
<u>Added Site Comments</u>	<u>6.9</u>
<u>Analysis Question Comments</u>	<u>6.10</u>

<u>Assessment Area 77</u>	<u>7.0</u>
<u>Executive Summary</u>	<u>7.1</u>
<u>Potential Sources</u>	<u>7.2</u>
<u>Added Sources</u>	<u>7.3</u>
<u>Potential Contaminants Summary</u>	<u>7.4</u>
<u>Potential Contaminants Listing</u>	<u>7.5</u>
<u>Protection Measures</u>	<u>7.6</u>
<u>Assessment Analysis</u>	<u>7.7</u>
<u>Site Comments</u>	<u>7.8</u>
<u>Added Site Comments</u>	<u>7.9</u>
<u>Analysis Question Comments</u>	<u>7.10</u>
<u>Assessment Area 78</u>	<u>8.0</u>
<u>Executive Summary</u>	<u>8.1</u>
<u>Potential Sources</u>	<u>8.2</u>
<u>Added Sources</u>	<u>8.3</u>
<u>Potential Contaminants Summary</u>	<u>8.4</u>
<u>Potential Contaminants Listing</u>	<u>8.5</u>
<u>Protection Measures</u>	<u>8.6</u>
<u>Assessment Analysis</u>	<u>8.7</u>
<u>Site Comments</u>	<u>8.8</u>
<u>Added Site Comments</u>	<u>8.9</u>
<u>Analysis Question Comments</u>	<u>8.10</u>
<u>Assessment Area 79</u>	<u>9.0</u>
<u>Executive Summary</u>	<u>9.1</u>
<u>Potential Sources</u>	<u>9.2</u>
<u>Added Sources</u>	<u>9.3</u>
<u>Potential Contaminants Summary</u>	<u>9.4</u>
<u>Potential Contaminants Listing</u>	<u>9.5</u>
<u>Protection Measures</u>	<u>9.6</u>
<u>Assessment Analysis</u>	<u>9.7</u>
<u>Site Comments</u>	<u>9.8</u>
<u>Added Site Comments</u>	<u>9.9</u>
<u>Analysis Question Comments</u>	<u>9.10</u>

<u>Assessment Area 80</u>	<u>10.0</u>
<u>Executive Summary</u>	<u>10.1</u>
<u>Potential Sources</u>	<u>10.2</u>
<u>Added Sources</u>	<u>10.3</u>
<u>Potential Contaminants Summary</u>	<u>10.4</u>
<u>Potential Contaminants Listing</u>	<u>10.5</u>
<u>Protection Measures</u>	<u>10.6</u>
<u>Assessment Analysis</u>	<u>10.7</u>
<u>Site Comments</u>	<u>10.8</u>
<u>Added Site Comments</u>	<u>10.9</u>
<u>Analysis Question Comments</u>	<u>10.10</u>
<u>Assessment Area 81</u>	<u>11.0</u>
<u>Executive Summary</u>	<u>11.1</u>
<u>Potential Sources</u>	<u>11.2</u>
<u>Added Sources</u>	<u>11.3</u>
<u>Potential Contaminants Summary</u>	<u>11.4</u>
<u>Potential Contaminants Listing</u>	<u>11.5</u>
<u>Protection Measures</u>	<u>11.6</u>
<u>Assessment Analysis</u>	<u>11.7</u>
<u>Site Comments</u>	<u>11.8</u>
<u>Added Site Comments</u>	<u>11.9</u>
<u>Analysis Question Comments</u>	<u>11.10</u>

Report Description

Detailed Explanation of Entire Report:

The 1996 amendments to the Safe Drinking Water Act require each state to develop a Source Water Assessment Program (SWAP) and a Source Water Assessment (SWA) for each Public Water Supply (PWS) that treats and distributes raw source water. In Kansas there are 761 public water supplies that require SWAs. A SWA includes a delineation of the source water assessment area, an inventory of potential contaminant sources, and a susceptibility analysis.

A PWS can consist of one or more individual assessment areas that require different assessments. In general, an assessment area is delineated at a two-mile fixed radius for a groundwater well. A surface water intake assessment area is the upstream-drainage area (watershed), inside the state border. Additionally, an assessment area can consist of an individual well, group of wells, an individual surface water intake, or multiple surface water intakes.

After each assessment is completed a report is automatically generated using an Internet-based application called the Automated Source Water Assessment Tool (ASWAT). The individual assessment reports combine to form the entire SWA report for a PWS.

A map of each Assessment Area was also generated with ASWAT. However, for security reasons the maps are not included in this report. To obtain a copy of the map(s), please contact your local PWS.

All PWS reports will be available for viewing and downloading on KDHE's Watershed Management Section website(<http://www.kdhe.state.ks.us/nps>) in 2004.

WICHITA, CITY OF Summary:

AA	Type	Diversion Id
71	Ground water multiple wells	004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011
72	Ground water multiple wells	040, 039, 037, 038
73	Ground water multiple wells	036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027
74	Ground water multiple wells	054, 055, 051, 052, 053

75	Ground water multiple wells	017, 018, 016
76	Ground water multiple wells	019, 020, 048, 049, 050
77	Ground water multiple wells	046, 047, 045
78	Ground water multiple wells	0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, OE8
79	Ground water multiple wells	041, 042, 044, 043
80	Ground water single well	026
81	Surface water single intake	999

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**
Diversion Id's: **004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011**
Status: **Accepted**
Submit Date: **2003-09-15 14:20:45**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	60	56	61	52	59	51
SLS Range	Mid	Mid	Mid	Mid	Mid	Low

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**
Diversion Id's: **004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011**
Status: **Accepted**
Submit Date: **2003-09-15 14:20:45**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**

Unregulated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2000026	Solomon's Trailer Wash	A-LAHV-T001	C
2000389	Prairie Flower Dairy	A-LAHV-M008	C
2001745	Unruh, Merlin	A-LAHV-S034	C
2002251	Wendling Farms	A-LAHV-B005	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000422	SPRING LAKE RESORT	C-LA06-NO02	C

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**
Diversion Id's: **004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011**
Status: **Accepted**
Submit Date: **2003-09-15 14:20:45**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9001280	school	0	B
9001332	recreational resort	0	B
9001333	cropland	115	B
9001281	cropland	115	C

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**
Diversion Id's: **004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011**
Status: **Accepted**
Submit Date: **2003-09-15 14:20:45**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
0	0	0	0	0	0

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**
Diversion Id's: **004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011**
Status: **Accepted**
Submit Date: **2003-09-15 14:20:45**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological **B** – Inorganic Compounds **B1** – Eutrophication – Phosphorous
B2 – Sedimentation **B*** – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
Did Not Contain Any Potential Contaminants			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**
Diversion Id's: **004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011**
Status: **Accepted**
Submit Date: **2003-09-15 14:20:45**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
No Protection Measures Listed				

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**
Diversion Id's: **004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011**
Status: **Accepted**
Submit Date: **2003-09-15 14:20:45**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**

Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	No	0	0	0	0	0	0
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	No	1	1	1	0	1	0
19	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	No	0	0	0	0	0	0
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	No	0	0	0	0	0	0
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
33	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
34	Is each confined livestock facility registered with KDHE?	No	1	1	1	0	1	0
35	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**
Diversion Id's: **004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011**
Status: **Accepted**
Submit Date: **2003-09-15 14:20:45**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Prairie Flower Dairy	2000389	This dairy facility has no groundwater monitoring requirements.	Nicole Fisher
Solomon's Trailer Wash	2000026	This truckwash has no groundwater monitoring.	Nicole Fisher
Unruh, Merlin	2001745	This swine facility has no groundwater monitoring.	Nicole Fisher

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
SPRING LAKE RESORT	6000422	This facility uses non-discharging lagoons.	Nicole Fisher

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**
Diversion Id's: **004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011**
Status: **Accepted**
Submit Date: **2003-09-15 14:20:45**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
cropland	9001281	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001333	This site could contaminate the public water supply.	Nicole Fisher
recreational resort	9001332	This site could contaminate the public water supply.	Nicole Fisher
school	9001280	This site could contaminate the public water supply.	Nicole Fisher

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**
Diversion Id's: **004, 007, 008, 009, 010, 012, 013, 014, 015, 001, 002, 003, 005, 006, 011**
Status: **Accepted**
Submit Date: **2003-09-15 14:20:45**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **71**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**
Diversion Id's: **040, 039, 037, 038**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:33**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	63	56	61	52	59	51
SLS Range	Mid	Mid	Mid	Mid	Mid	Low

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**
Diversion Id's: **040, 039, 037, 038**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:33**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**

Unregulated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2000348	Purkey, Donald	A-LASG-MA01	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**
Diversion Id's: **040, 039, 037, 038**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:33**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
Did Not Add Any Site Sources			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**
Diversion Id's: **040, 039, 037, 038**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:33**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
0	0	0	0	0	0

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**
Diversion Id's: **040, 039, 037, 038**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:33**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological **B** – Inorganic Compounds **B1** – Eutrophication – Phosphorous
B2 – Sedimentation **B*** – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
Did Not Contain Any Potential Contaminants			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**
Diversion Id's: **040, 039, 037, 038**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:33**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
No Protection Measures Listed				

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**
Diversion Id's: **040, 039, 037, 038**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:33**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**

Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	No	0	0	0	0	0	0
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	No	1	1	1	0	1	0
19	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0
24	Is there a railroad or major highway in Zone B or C?	No	0	0	0	0	0	0
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	Yes	1	1	1	1	1	1
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	No	0	0	0	0	0	0
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
33	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
34	Is each confined livestock facility registered with KDHE?	No	1	1	1	0	1	0
35	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**
Diversion Id's: **040, 039, 037, 038**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:33**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**
Diversion Id's: **040, 039, 037, 038**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:33**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Did Not Receive Any Comments			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**
Diversion Id's: **040, 039, 037, 038**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:33**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **72**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**
Diversion Id's: **036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:57**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	72	73	79	68	77	67
SLS Range	Mid	Mid	Mid	Mid	Mid	Mid

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**
Diversion Id's: **036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:57**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
171734	Machinery, Except Electrical Manufacturing	3599	B
171766	General Farm, Primarily Crop	191	C
171695	Veterinary Services, Specialties	742	C
171696	Veterinary Services, Specialties	742	C
164134	Welding apparatus Manufacturing	3548	C
171703	Refuse Systems	4953	C
171704	Recreational vehicle sales and repair	5012	C
164135	Gasoline Service Station	5541	C
164139	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
171718	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2002689	Kurr Cattle Co.	A-LAHV-C001	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6001003	BENTLEY	M-AR11-NO01	C

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**
Diversion Id's: **036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:57**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
Did Not Add Any Site Sources			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**
Diversion Id's: **036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:57**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
3	2	10	1	6	2

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**
Diversion Id's: **036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:57**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological **B** – Inorganic Compounds **B1** – Eutrophication – Phosphorous
B2 – Sedimentation **B*** – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
5541	Gasoline Service Station	Inorganics, VOCs	B
"	"	"	D
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	B
"	"	"	D
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
3548	Welding apparatus Manufacturing	inorganics, VOCs	B
"	"	"	D
191	General Farm, Primarily Crop	fertilizers, Pesticides	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
5012	Recreational vehicle sales and repair	Inorganics	B
4953	Refuse Systems	ALL	A

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
4953	Refuse Systems	ALL	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
"	"	"	C*
"	"	"	D

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**
Diversion Id's: **036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:57**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
5541	Gasoline Service Station	Inorganics, VOCs	Maintain area to minimize fuel contamination	NA
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA
3548	Welding apparatus Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
191	General Farm, Primarily Crop	fertilizers, Pesticides	Maintain good erosion control practices and minimize the use of chemicals	NA

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
5012	Recreational vehicle sales and repair	Inorganics	Discharge to a POTW. Store oils and lubricants properly	NA
4953	Refuse Systems	ALL	Store wastes properly in order to minimize contact with storm water.	Maintain the lagoon or storage vessel properly. Control storm water run on and runoff to minimize contamination of storm water

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**
Diversion Id's: **036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:57**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**

Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	Yes	1	1	1	1	1	1
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	No	1	1	1	0	1	0
19	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
21	Are any orchards present in Zone B?	Yes	0	0	1	0	1	0
22	Are orchard nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	Yes	1	1	1	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	Yes	1	1	1	1	1	1
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	No	0	0	0	0	0	0
31	Are any commercial, industrial, or urban area present in Zone C?	Yes	1	1	1	1	1	1
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
33	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
34	Is each confined livestock facility registered with KDHE?	No	1	1	1	0	1	0
35	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**
Diversion Id's: **036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:57**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**
Diversion Id's: **036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:57**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Did Not Receive Any Comments			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**
Diversion Id's: **036, 025, 024, 023, 021, 022, 035, 034, 033, 030, 029, 032, 031, 028, 027**
Status: **Accepted**
Submit Date: **2003-09-15 14:21:57**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **73**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**
Diversion Id's: **054, 055, 051, 052, 053**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:15**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	72	69	77	64	74	63
SLS Range	Mid	Mid	Mid	Mid	Mid	Mid

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**
Diversion Id's: **054, 055, 051, 052, 053**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:15**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**

Unregulated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2002601	Morris, Jerry P.	A-LAHV-H001	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6001003	BENTLEY	M-AR11-NO01	C

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**
Diversion Id's: **054, 055, 051, 052, 053**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:15**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
Did Not Add Any Site Sources			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**
Diversion Id's: **054, 055, 051, 052, 053**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:15**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
0	0	0	0	0	0

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**
Diversion Id's: **054, 055, 051, 052, 053**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:15**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological **B** – Inorganic Compounds **B1** – Eutrophication – Phosphorous
B2 – Sedimentation **B*** – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
Did Not Contain Any Potential Contaminants			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**
Diversion Id's: **054, 055, 051, 052, 053**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:15**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
No Protection Measures Listed				

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**
Diversion Id's: **054, 055, 051, 052, 053**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:15**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**

Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	No	0	0	0	0	0	0
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	No	1	1	1	0	1	0
19	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
21	Are any orchards present in Zone B?	Yes	0	0	1	0	1	0
22	Are orchard nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	Yes	1	1	1	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	Yes	1	1	1	1	1	1
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	Yes	1	1	1	1	1	1
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
33	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
34	Is each confined livestock facility registered with KDHE?	No	1	1	1	0	1	0
35	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**
Diversion Id's: **054, 055, 051, 052, 053**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:15**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**
Diversion Id's: **054, 055, 051, 052, 053**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:15**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Did Not Receive Any Comments			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**
Diversion Id's: **054, 055, 051, 052, 053**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:15**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **74**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**
Diversion Id's: **017, 018, 016**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:34**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	72	69	72	64	68	63
SLS Range	Mid	Mid	Mid	Mid	Mid	Mid

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**
Diversion Id's: **017, 018, 016**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:34**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
167503	Auto Truck Repair Service	7538	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2002251	Wendling Farms	A-LAHV-B005	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000498	Usd 440, Halstead High School	06010	C

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3001486	Idaho Timber	25551	C

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**
Diversion Id's: **017, 018, 016**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:34**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9001280	school	0	B
9001281	cropland	115	C

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**
Diversion Id's: **017, 018, 016**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:34**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
0	0	1	0	1	0

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**
Diversion Id's: **017, 018, 016**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:34**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological **B** – Inorganic Compounds **B1** – Eutrophication – Phosphorous
B2 – Sedimentation **B*** – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**
Diversion Id's: **017, 018, 016**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:34**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**
Diversion Id's: **017, 018, 016**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:34**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**

Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	Yes	1	1	1	1	1	1
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	No	0	0	0	0	0	0
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	No	1	1	1	0	1	0
19	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	Yes	1	1	1	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	No	0	0	0	0	0	0
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	Yes	1	1	1	1	1	1
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
33	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
34	Is each confined livestock facility registered with KDHE?	No	1	1	1	0	1	0
35	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**
Diversion Id's: **017, 018, 016**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:34**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**
Diversion Id's: **017, 018, 016**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:34**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
cropland	9001281	This site could contaminate the public water supply.	Nicole Fisher
school	9001280	This site could contaminate the public water supply.	Nicole Fisher

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**
Diversion Id's: **017, 018, 016**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:34**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **75**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**
Diversion Id's: **019, 020, 048, 049, 050**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:54**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	63	59	64	56	62	55
SLS Range	Mid	Mid	Mid	Mid	Mid	Mid

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**
Diversion Id's: **019, 020, 048, 049, 050**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:54**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
171734	Machinery, Except Electrical Manufacturing	3599	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2002251	Wendling Farms	A-LAHV-B005	C
2002601	Morris, Jerry P.	A-LAHV-H001	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**
Diversion Id's: **019, 020, 048, 049, 050**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:54**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
Did Not Add Any Site Sources			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**
Diversion Id's: **019, 020, 048, 049, 050**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:54**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
0	0	1	0	1	0

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**
Diversion Id's: **019, 020, 048, 049, 050**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:54**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological	B – Inorganic Compounds	B1 – Eutrophication – Phosphorous
B2 – Sedimentation	B* – Nitrates	C – Synthetic Organic Compounds
C* – Pesticides	D – Volatile Organic Compounds	

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	B
"	"	"	D

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**
Diversion Id's: **019, 020, 048, 049, 050**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:54**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**
Diversion Id's: **019, 020, 048, 049, 050**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:54**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**

Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	Yes	1	1	1	1	1	1
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	No	0	0	0	0	0	0
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	No	1	1	1	0	1	0
19	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	No	0	0	0	0	0	0
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	No	0	0	0	0	0	0
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
33	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
34	Is each confined livestock facility registered with KDHE?	No	1	1	1	0	1	0
35	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**
Diversion Id's: **019, 020, 048, 049, 050**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:54**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**
Diversion Id's: **019, 020, 048, 049, 050**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:54**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Did Not Receive Any Comments			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**
Diversion Id's: **019, 020, 048, 049, 050**
Status: **Accepted**
Submit Date: **2003-09-15 14:22:54**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **76**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**
Diversion Id's: **046, 047, 045**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:19**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	60	56	61	52	59	51
SLS Range	Mid	Mid	Mid	Mid	Mid	Low

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**
Diversion Id's: **046, 047, 045**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:19**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**

Unregulated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Confined Animal Feeding Operations Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**
Diversion Id's: **046, 047, 045**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:19**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
Did Not Add Any Site Sources			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**
Diversion Id's: **046, 047, 045**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:19**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
0	0	0	0	0	0

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**
Diversion Id's: **046, 047, 045**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:19**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological **B** – Inorganic Compounds **B1** – Eutrophication – Phosphorous
B2 – Sedimentation **B*** – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
Did Not Contain Any Potential Contaminants			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**
Diversion Id's: **046, 047, 045**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:19**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
No Protection Measures Listed				

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**
Diversion Id's: **046, 047, 045**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:19**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**

Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	No	0	0	0	0	0	0
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	No	1	1	1	0	1	0
19	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	No	0	0	0	0	0	0
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	No	0	0	0	0	0	0
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
33	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
34	Is each confined livestock facility registered with KDHE?	No	1	1	1	0	1	0
35	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**
Diversion Id's: **046, 047, 045**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:19**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**
Diversion Id's: **046, 047, 045**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:19**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Did Not Receive Any Comments			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**
Diversion Id's: **046, 047, 045**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:19**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **77**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**
Diversion Id's: **0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, 0E8**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:48**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	60	66	61	76	68	80
SLS Range	Mid	Mid	Mid	Mid	Mid	Mid

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**
Diversion Id's: **0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, 0E8**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:48**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
176115	Single-family Housing Construction	1521	B
176532	Single-family Housing Construction	1521	B
176631	Single-family Housing Construction	1521	B
176663	Plating and Polishing Manufacturing	3471	B
176632	Repair Services, Nec	7699	B
176107	Golf Course	7992	B
173672	Dairy Farms	241	C
175745	Veterinary Services, Specialties	742	C
175746	Veterinary Services, Specialties	742	C
175858	Veterinary Services, Specialties	742	C
176350	Veterinary Services, Specialties	742	C
176818	Veterinary Services, Specialties	742	C
176933	Veterinary Services, Specialties	742	C
176934	Veterinary Services, Specialties	742	C
176935	Veterinary Services, Specialties	742	C
182579	Veterinary Services, Specialties	742	C
183808	Veterinary Services, Specialties	742	C
175711	Animal Specialty Services	752	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
175747	Animal Specialty Services	752	C
175869	Animal Specialty Services	752	C
175974	Animal Specialty Services	752	C
176053	Animal Specialty Services	752	C
183787	Animal Specialty Services	752	C
184209	Animal Specialty Services	752	C
173764	Drilling Oil and Gas Wells	1381	C
173785	Drilling Oil and Gas Wells	1381	C
173803	Drilling Oil and Gas Wells	1381	C
174013	Drilling Oil and Gas Wells	1381	C
175004	Drilling Oil and Gas Wells	1381	C
174078	Oil and Gas Field services	1389	C
174079	Oil and Gas Field services	1389	C
174239	Oil and Gas Field services	1389	C
174998	Oil and Gas Field services	1389	C
175203	Oil and Gas Field services	1389	C
175227	Oil and Gas Field services	1389	C
176863	Oil and Gas Field services	1389	C
174538	Single-family Housing Construction	1521	C
174542	Single-family Housing Construction	1521	C
174971	Single-family Housing Construction	1521	C
175735	Single-family Housing Construction	1521	C
175769	Single-family Housing Construction	1521	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
176189	Single-family Housing Construction	1521	C
176258	Single-family Housing Construction	1521	C
176516	Single-family Housing Construction	1521	C
176561	Single-family Housing Construction	1521	C
176724	Single-family Housing Construction	1521	C
176821	Single-family Housing Construction	1521	C
176822	Single-family Housing Construction	1521	C
176900	Single-family Housing Construction	1521	C
177263	Single-family Housing Construction	1521	C
177267	Single-family Housing Construction	1521	C
181164	Single-family Housing Construction	1521	C
181169	Single-family Housing Construction	1521	C
181170	Single-family Housing Construction	1521	C
181591	Single-family Housing Construction	1521	C
182537	Single-family Housing Construction	1521	C
183701	Single-family Housing Construction	1521	C
183743	Single-family Housing Construction	1521	C
183760	Single-family Housing Construction	1521	C
183761	Single-family Housing Construction	1521	C
183848	Single-family Housing Construction	1521	C
183889	Single-family Housing Construction	1521	C
183956	Single-family Housing Construction	1521	C
183990	Single-family Housing Construction	1521	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
184020	Single-family Housing Construction	1521	C
184210	Single-family Housing Construction	1521	C
184369	Single-family Housing Construction	1521	C
184831	Single-family Housing Construction	1521	C
184912	Single-family Housing Construction	1521	C
185007	Single-family Housing Construction	1521	C
185252	Single-family Housing Construction	1521	C
185283	Single-family Housing Construction	1521	C
185302	Single-family Housing Construction	1521	C
185346	Single-family Housing Construction	1521	C
173698	Nonresidential Construction	1542	C
173765	Nonresidential Construction	1542	C
176481	Nonresidential Construction	1542	C
176804	Nonresidential Construction	1542	C
176827	Nonresidential Construction	1542	C
176864	Nonresidential Construction	1542	C
176865	Nonresidential Construction	1542	C
185073	Nonresidential Construction	1542	C
185357	Nonresidential Construction	1542	C
173909	Highway and Street Construction	1611	C
182595	Highway and Street Construction	1611	C
184167	Highway and Street Construction	1611	C
176566	Wrecking and Demolition Work, Construction Demolition Landfill	1795	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
173866	Meat Packing Plant Manufacturing	2011	C
175531	Meat Packing Plant Manufacturing	2011	C
175532	Meat Packing Plant Manufacturing	2011	C
180673	Wood Pallets and Skids Manufacturing	2448	C
173944	Prefabricated Wood Buildings Manufacturing	2452	C
175753	Prefabricated Wood Buildings Manufacturing	2452	C
174684	Furniture and Fixtures Manufacturing	2599	C
174619	Newspapers Publishing and Printing	2711	C
174957	Newspapers Publishing and Printing	2711	C
174977	Newspapers Publishing and Printing	2711	C
175037	Newspapers Publishing and Printing	2711	C
183402	Newspapers Publishing and Printing	2711	C
183991	Newspapers Publishing and Printing	2711	C
173778	Commercial Printing–Lithographic	2752	C
173828	Commercial Printing–Lithographic	2752	C
173829	Commercial Printing–Lithographic	2752	C
174001	Commercial Printing–Lithographic	2752	C
174494	Commercial Printing–Lithographic	2752	C
174533	Commercial Printing–Lithographic	2752	C
174543	Commercial Printing–Lithographic	2752	C
174550	Commercial Printing–Lithographic	2752	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
174877	Commercial Printing–Lithographic	2752	C
174979	Commercial Printing–Lithographic	2752	C
176162	Commercial Printing–Lithographic	2752	C
176656	Commercial Printing–Lithographic	2752	C
176797	Commercial Printing–Lithographic	2752	C
180622	Commercial Printing–Lithographic	2752	C
181166	Commercial Printing–Lithographic	2752	C
181174	Commercial Printing–Lithographic	2752	C
181585	Commercial Printing–Lithographic	2752	C
182531	Commercial Printing–Lithographic	2752	C
184205	Commercial Printing–Lithographic	2752	C
184251	Commercial Printing–Lithographic	2752	C
184533	Commercial Printing–Lithographic	2752	C
184793	Commercial Printing–Lithographic	2752	C
173680	Commercial Printing NEC	2759	C
173733	Commercial Printing NEC	2759	C
174527	Commercial Printing NEC	2759	C
174670	Commercial Printing NEC	2759	C
174671	Commercial Printing NEC	2759	C
174672	Commercial Printing NEC	2759	C
175081	Commercial Printing NEC	2759	C
175294	Commercial Printing NEC	2759	C
175298	Commercial Printing NEC	2759	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
176830	Commercial Printing NEC	2759	C
176837	Commercial Printing NEC	2759	C
180800	Commercial Printing NEC	2759	C
183852	Commercial Printing NEC	2759	C
184137	Commercial Printing NEC	2759	C
184194	Commercial Printing NEC	2759	C
185274	Commercial Printing NEC	2759	C
185292	Commercial Printing NEC	2759	C
185315	Commercial Printing NEC	2759	C
184496	Industrial Gases Manufacturing	2813	C
185281	Industrial Inorganic Chemicals Manufacturing	2819	C
175303	Polishes and Sanitation goods Manufacturing	2842	C
174691	Paints and Allied Products Manufacturing	2851	C
185332	Chemical Preparations Manufacturing	2899	C
174563	Lubricating Oils and Greases Manufacturing	2992	C
174769	Lubricating Oils and Greases Manufacturing	2992	C
184336	Lubricating Oils and Greases Manufacturing	2992	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
184541	Gaskets, packing and sealing devices Manufacturing	3053	C
175526	Plastics products Manufacturing	3089	C
184870	Plastics products Manufacturing	3089	C
184919	Plastics products Manufacturing	3089	C
185220	Plastics products Manufacturing	3089	C
185427	Plastics products Manufacturing	3089	C
176905	Brick and Structural Clay Tile Manufacturing	3251	C
183544	Nonmetallic Mineral Products NEC	3299	C
184149	Hand and Edge tools Manufacturing	3423	C
176823	Sheet Metal Work Manufacturing	3444	C
184994	Sheet Metal Work Manufacturing	3444	C
174545	Metal Stampings Manufacturing	3469	C
184155	Metal Stampings Manufacturing	3469	C
183545	Plating and Polishing Manufacturing	3471	C
184153	Plating and Polishing Manufacturing	3471	C
184921	Plating and Polishing Manufacturing	3471	C
184516	Metal Coating and Allied Services Manufacturing	3479	C
181184	Refrigeration and Heating Equipment Manufacturing	3585	C
175334	Machinery, Except Electrical Manufacturing	3599	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
175340	Machinery, Except Electrical Manufacturing	3599	C
183766	Machinery, Except Electrical Manufacturing	3599	C
183910	Machinery, Except Electrical Manufacturing	3599	C
184126	Machinery, Except Electrical Manufacturing	3599	C
184128	Machinery, Except Electrical Manufacturing	3599	C
184258	Machinery, Except Electrical Manufacturing	3599	C
184441	Machinery, Except Electrical Manufacturing	3599	C
184772	Machinery, Except Electrical Manufacturing	3599	C
184864	Machinery, Except Electrical Manufacturing	3599	C
184866	Machinery, Except Electrical Manufacturing	3599	C
184867	Machinery, Except Electrical Manufacturing	3599	C
184990	Machinery, Except Electrical Manufacturing	3599	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
185287	Machinery, Except Electrical Manufacturing	3599	C
184991	Motors and Generators Manufacturing	3621	C
173817	Cathode Ray Television Picture Tubes Manufacturing	3672	C
175257	Engine Electrical Equipment Manufacturing	3694	C
180793	Motor Vehicles and Car Bodies Manufacturing	3711	C
185293	Aircraft—manufacturing	3721	C
176327	Aircraft Equipment Manufacturing	3728	C
176346	Aircraft Equipment Manufacturing	3728	C
176603	Aircraft Equipment Manufacturing	3728	C
176728	Aircraft Equipment Manufacturing	3728	C
176749	Aircraft Equipment Manufacturing	3728	C
176765	Aircraft Equipment Manufacturing	3728	C
176768	Aircraft Equipment Manufacturing	3728	C
176901	Aircraft Equipment Manufacturing	3728	C
183805	Aircraft Equipment Manufacturing	3728	C
183897	Aircraft Equipment Manufacturing	3728	C
184156	Aircraft Equipment Manufacturing	3728	C
184922	Aircraft Equipment Manufacturing	3728	C
185288	Aircraft Equipment Manufacturing	3728	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
185339	Motorcycles, Bicycles, and Parts Manufacturing	3751	C
174674	Brooms and Brushes Manufacturing	3991	C
174675	Signs and Advertising Display Manufacturing	3993	C
174879	Signs and Advertising Display Manufacturing	3993	C
175321	Signs and Advertising Display Manufacturing	3993	C
175730	Signs and Advertising Display Manufacturing	3993	C
176562	Signs and Advertising Display Manufacturing	3993	C
176750	Signs and Advertising Display Manufacturing	3993	C
181229	Signs and Advertising Display Manufacturing	3993	C
181244	Signs and Advertising Display Manufacturing	3993	C
181245	Signs and Advertising Display Manufacturing	3993	C
183708	Signs and Advertising Display Manufacturing	3993	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
184127	Signs and Advertising Display Manufacturing	3993	C
184206	Signs and Advertising Display Manufacturing	3993	C
184432	Signs and Advertising Display Manufacturing	3993	C
184438	Signs and Advertising Display Manufacturing	3993	C
185324	Signs and Advertising Display Manufacturing	3993	C
183943	Local Trucking, without Storage	4212	C
184597	Local Trucking, without Storage	4212	C
184459	Farm Product Warehousing and Storage	4221	C
175052	Pipeline Terminal	4789	C
184405	Combination Utility Services, nec	4939	C
182555	Refuse Systems	4953	C
183575	Refuse Systems	4953	C
184157	Refuse Systems	4953	C
176341	Recreational vehicle sales and repair	5012	C
176535	Construction and Mining Machinery	5082	C
183542	Construction and Mining Machinery	5082	C
183853	Construction and Mining Machinery	5082	C
185003	Construction and Mining Machinery	5082	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
183685	Farm and Garden Machinery	5083	C
185352	Farm and Garden Machinery	5083	C
176036	Scrap and Waste Materials	5093	C
181598	Scrap and Waste Materials	5093	C
184158	Scrap and Waste Materials	5093	C
174906	Petroleum Bulk Stations and Terminals (Truck Farm)	5171	C
175768	Gasoline Service Station	5541	C
175897	Gasoline Service Station	5541	C
176689	Gasoline Service Station	5541	C
176796	Gasoline Service Station	5541	C
180632	Gasoline Service Station	5541	C
184143	Gasoline Service Station	5541	C
182551	Recreational vehicle sales and repair	5561	C
184992	Recreational vehicle sales and repair	5561	C
176177	Sporting and Recreational Camps	7032	C
174664	Photofinishing Laboratory	7384	C
175834	Photofinishing Laboratory	7384	C
176376	Photofinishing Laboratory	7384	C
180764	Photofinishing Laboratory	7384	C
183705	Photofinishing Laboratory	7384	C
185305	Photofinishing Laboratory	7384	C
185391	Photofinishing Laboratory	7384	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
185426	Photofinishing Laboratory	7384	C
173678	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
173679	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
174492	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
175300	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
175306	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
175312	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
175350	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
175352	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
175353	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
175361	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
175367	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
175545	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
175972	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
176794	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
176882	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
181219	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
183554	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
183718	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
183802	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
184162	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
184436	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
184513	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
184542	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
184789	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
184872	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
184915	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
184923	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
185331	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
185349	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
185353	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
185430	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
173667	Auto Truck Repair Service	7538	C
173673	Auto Truck Repair Service	7538	C
174513	Auto Truck Repair Service	7538	C
174514	Auto Truck Repair Service	7538	C
174585	Auto Truck Repair Service	7538	C
174667	Auto Truck Repair Service	7538	C
174668	Auto Truck Repair Service	7538	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
174678	Auto Truck Repair Service	7538	C
175087	Auto Truck Repair Service	7538	C
175336	Auto Truck Repair Service	7538	C
175354	Auto Truck Repair Service	7538	C
175363	Auto Truck Repair Service	7538	C
175571	Auto Truck Repair Service	7538	C
175597	Auto Truck Repair Service	7538	C
175626	Auto Truck Repair Service	7538	C
175971	Auto Truck Repair Service	7538	C
175999	Auto Truck Repair Service	7538	C
176160	Auto Truck Repair Service	7538	C
176170	Auto Truck Repair Service	7538	C
176530	Auto Truck Repair Service	7538	C
176616	Auto Truck Repair Service	7538	C
176698	Auto Truck Repair Service	7538	C
176738	Auto Truck Repair Service	7538	C
176748	Auto Truck Repair Service	7538	C
176770	Auto Truck Repair Service	7538	C
176784	Auto Truck Repair Service	7538	C
176785	Auto Truck Repair Service	7538	C
176787	Auto Truck Repair Service	7538	C
177209	Auto Truck Repair Service	7538	C
177313	Auto Truck Repair Service	7538	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
177321	Auto Truck Repair Service	7538	C
182526	Auto Truck Repair Service	7538	C
182534	Auto Truck Repair Service	7538	C
182546	Auto Truck Repair Service	7538	C
183577	Auto Truck Repair Service	7538	C
183637	Auto Truck Repair Service	7538	C
183771	Auto Truck Repair Service	7538	C
183803	Auto Truck Repair Service	7538	C
183812	Auto Truck Repair Service	7538	C
183831	Auto Truck Repair Service	7538	C
183902	Auto Truck Repair Service	7538	C
183905	Auto Truck Repair Service	7538	C
183957	Auto Truck Repair Service	7538	C
183962	Auto Truck Repair Service	7538	C
183964	Auto Truck Repair Service	7538	C
184147	Auto Truck Repair Service	7538	C
184185	Auto Truck Repair Service	7538	C
184217	Auto Truck Repair Service	7538	C
184368	Auto Truck Repair Service	7538	C
184478	Auto Truck Repair Service	7538	C
184479	Auto Truck Repair Service	7538	C
184494	Auto Truck Repair Service	7538	C
184538	Auto Truck Repair Service	7538	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
185017	Auto Truck Repair Service	7538	C
185285	Auto Truck Repair Service	7538	C
185300	Auto Truck Repair Service	7538	C
185321	Auto Truck Repair Service	7538	C
185329	Auto Truck Repair Service	7538	C
185330	Auto Truck Repair Service	7538	C
185431	Auto Truck Repair Service	7538	C
174373	Car Wash	7542	C
174529	Car Wash	7542	C
175337	Car Wash	7542	C
175541	Car Wash	7542	C
175546	Car Wash	7542	C
175547	Car Wash	7542	C
176848	Car Wash	7542	C
181550	Car Wash	7542	C
183696	Car Wash	7542	C
184489	Car Wash	7542	C
185409	Car Wash	7542	C
185410	Car Wash	7542	C
174094	Repair Services, Nec	7699	C
174099	Repair Services, Nec	7699	C
174204	Repair Services, Nec	7699	C
175542	Repair Services, Nec	7699	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
176483	Repair Services, Nec	7699	C
176484	Repair Services, Nec	7699	C
176736	Repair Services, Nec	7699	C
176745	Repair Services, Nec	7699	C
176879	Repair Services, Nec	7699	C
182527	Repair Services, Nec	7699	C
183555	Repair Services, Nec	7699	C
183811	Repair Services, Nec	7699	C
183968	Repair Services, Nec	7699	C
183977	Repair Services, Nec	7699	C
184019	Repair Services, Nec	7699	C
184129	Repair Services, Nec	7699	C
184141	Repair Services, Nec	7699	C
184344	Repair Services, Nec	7699	C
184351	Repair Services, Nec	7699	C
185338	Repair Services, Nec	7699	C
176709	Racing, Including Track Operation	7948	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3002249	Adorers Of The Blood Of Christ	29334	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000205	AERO SHEET METAL, INCORPORATED	C208700001	C
7000206	AIRCRAFT INSTRUMENTS DEVELOPMENT INC. (AID)	C208700003	C
7000225	RAMADA PARKING GARAGE SITE	C208700118	C
7000228	GILBERT MOSLEY	C208700175	C
7000229	COLEMAN – SOUTH (GILBERT MOSLEY)	C208700181	C
7000247	ST FRANCIS REGIONAL MEDICAL CENTER (SEE NIC SITE)	C208703005	C
7000284	BUS BARN FACILITY SOURCE AREA	C208770621	C
7000285	BUS BARN FACILITY SOURCE AREA	C208770621	C
7000294	FOUR SEASONS	C208770841	C
7000308	2ND GLENN	C208770880	C
7000313	1812 W 2ND STREET	C208770924	C
7000315	123 N MARKET	C208770979	C

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000294	HOUSE OIL COMPANY	I-AR94-PO57	C
6000301	MARINA POINT II BLDG – A.J.INVEST.	I-AR94-CO62	C
6000353	TIFFANY'S WTF	C-AR94-NO22	C
6000354	TIFFANY'S WTF	C-AR94-NO22	C
6000355	TIFFANY'S WTF	C-AR94-NO22	C
6000570	MORTON SALT	I-AR82-PO01	C
6000571	MORTON SALT	I-AR82-PO01	C
6000572	MORTON SALT	I-AR82-PO01	C
6000576	WESTERN RESOURCES – WICHITA STA.	I-AR94-BO04	C
6000578	FRIENDS UNIVERSITY – DAVIS HALL	I-AR94-CO47	C
6000581	MARINA POINT OFFICES LC	I-AR94-CO63	C
6000586	DOLESE BROTHERS COMPANY	I-AR94-NP01	C
6000607	INDUSTRIAL GASES OF WICHITA, INC	I-AR94-PO63	C
6000609	COLEMAN CO. (FACTORIES A B)	I-AR94-PO76	C

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**
Diversion Id's: **0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, 0E8**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:48**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9001685	former landfill area	10070	B
9001687	lawn care center	10073	B
9001684	garden center/greenhouse	10074	C
9001683	gas station	5541	C
9000696		7216	C
9001686	dry cleaners	7216	C

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**
Diversion Id's: **0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, 0E8**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:48**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
66	4	304	105	248	56

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Public Water Supply: **WICHITA, CITY OF**
 Assessment Area: **78**
 Diversion Id's: **0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, 0E8**
 Status: **Accepted**
 Submit Date: **2003-09-15 14:23:48**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological	B – Inorganic Compounds	B1 – Eutrophication – Phosphorous
B2 – Sedimentation	B* – Nitrates	C – Synthetic Organic Compounds
C* – Pesticides	D – Volatile Organic Compounds	

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
3728	Aircraft Equipment Manufacturing	inorganics, VOCs	B
"	"	"	D
3721	Aircraft--manufacturing	inorganics, VOCs	B
"	"	"	D
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D
3251	Brick and Structural Clay Tile Manufacturing	Minerals and TSS	B
3991	Brooms and Brushes Manufacturing	inorganics, VOCs	B
"	"	"	D
7542	Car Wash	Inorganics, VOCs	B
"	"	"	B1
"	"	"	B2
"	"	"	D
3672	Cathode Ray Television Picture Tubes Manufacturing	inorganics, VOCs	B
"	"	"	D
2899	Chemical Preparations Manufacturing	VOCs, inorganics	D
4939	Combination Utility Services, nec	Inorganics, VOCs	B

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
4939	Combination Utility Services, nec	Inorganics, VOCs	D
5082	Construction and Mining Machinery	NA	NA
1381	Drilling Oil and Gas Wells	Oil, Salt Water	B
"	"	"	C
3694	Engine Electrical Equipment Manufacturing	inorganics, VOCs	B
"	"	"	D
2599	Furniture and Fixtures Manufacturing	TSS, VOCs	B
"	"	"	D
3053	Gaskets, packing and sealing devices Manufacturing	Inorganics, metals, VOCs	B
"	"	"	D
5541	Gasoline Service Station	Inorganics, VOCs	B
"	"	"	D
7992	Golf Course	Fertilizers and pesticides	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
3423	Hand and Edge tools Manufacturing	inorganics, VOCs	B
"	"	"	D

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
1611	Highway and Street Construction	Sedimentation	B2
2813	Industrial Gases Manufacturing	NA	D
2819	Industrial Inorganic Chemicals Manufacturing	metals, solvents	B
"	"	"	D
4212	Local Trucking, without Storage	VOCs	D
2992	Lubricating Oils and Greases Manufacturing	Semi volatiles, VOCs	C
"	"	"	D
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	B
"	"	"	D
2011	Meat Packing Plant Manufacturing	BOD, pathogens, Oil and grease	A
"	"	"	B*
3479	Metal Coating and Allied Services Manufacturing	inorganics, VOCs	B
"	"	"	D
3469	Metal Stampings Manufacturing	inorganics, VOCs	B
"	"	"	D
3711	Motor Vehicles and Car Bodies Manufacturing	inorganics, VOCs	B
"	"	"	D
3751	Motorcycles, Bicycles, and Parts Manufacturing	NA	B
"	"	"	D

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
3621	Motors and Generators Manufacturing	inorganics, VOCs	B
"	"	"	D
1542	Nonresidential Construction	Sedimentation	B2
1389	Oil and Gas Field services	Oil, Salt Water	B
"	"	"	C
2851	Paints and Allied Products Manufacturing	Solvents and other VOCs, metals	B
"	"	"	D
5171	Petroleum Bulk Stations and Terminals (Truck Farm)	Inorganics, VOCs	B
"	"	"	D
7384	Photofinishing Laboratory	NA	B
"	"	"	D
4789	Pipeline Terminal	Inorganics, VOCs	B
"	"	"	D
3089	Plastics products Manufacturing	inorganics, VOCs	B
"	"	"	D
3471	Plating and Polishing Manufacturing	Inorganics, metals, VOCs and metal etch	B
"	"	"	D
2842	Polishes and Sanitation goods Manufacturing	VOCs	B
"	"	"	B1

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
2842	Polishes and Sanitation goods Manufacturing	VOCs	D
2452	Prefabricated Wood Buildings Manufacturing	TSS	B
"	"	"	D
3585	Refrigeration and Heating Equipment Manufacturing	inorganics, VOCs	B
"	"	"	D
5093	Scrap and Waste Materials	Metals, TSS	B
3444	Sheet Metal Work Manufacturing	Metals and TSS, VOCs and metal etch	B
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	B
"	"	"	D
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
2448	Wood Pallets and Skids Manufacturing	TSS, VOCs	B

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
2448	Wood Pallets and Skids Manufacturing	TSS, VOCs	D
1795	Wrecking and Demolition Work, Construction Demolition Landfill	TSS, could contain metals	B1
"	"	"	B2
752	Animal Specialty Services	Sanitary, fertilizers	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
2752	Commercial Printing–Lithographic	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
241	Dairy Farms	Sanitary, fertilizers	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
4221	Farm Product Warehousing and Storage	TSS, VOCs	B
"	"	"	D
5083	Farm and Garden Machinery	inorganics	B
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
3299	Nonmetallic Mineral Products NEC	Minerals and TSS	B
"	"	"	B2
7948	Racing, Including Track Operation		NA
5012	Recreational vehicle sales and repair	Inorganics	B
5561	Recreational vehicle sales and repair	Inorganics	B
4953	Refuse Systems	ALL	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
"	"	"	C*
"	"	"	D

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7699	Repair Services, Nec	inorganics	B

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**
Diversion Id's: **0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, 0E8**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:48**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3728	Aircraft Equipment Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 464 and State or federal Storm water pollution prevention regulations
3721	Aircraft—manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 464 and State or federal Storm water pollution prevention regulations
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and
3251	Brick and Structural Clay Tile Manufacturing	Minerals and TSS	Minimize outdoor storage and control storm water runoff.	State or federal Storm water pollution prevention regulations
3991	Brooms and Brushes Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
7542	Car Wash	Inorganics, VOCs	Install and maintain sediment and grease traps where appropriate	40 CFR 442

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3672	Cathode Ray Television Picture Tubes Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 469 and State or federal Storm water pollution prevention regulations
2899	Chemical Preparations Manufacturing	VOCs, inorganics	Collect and pre-treat prior to discharge to a POTW	40 CFR 415 or 414 and State or federal Storm water pollution prevention regulations
4939	Combination Utility Services, nec	Inorganics, VOCs	Maintain secondary containment for fuel storage and fueling areas. Maintain and inspect. Effect repairs promptly	NA
5082	Construction and Mining Machinery	NA	Discharge to POTW	NA
1381	Drilling Oil and Gas Wells	Oil, Salt Water	Drill water retention and treatment	KAR 28–41, 45, 40 CFR 435
3694	Engine Electrical Equipment Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 469 and State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
2599	Furniture and Fixtures Manufacturing	TSS, VOCs	Discharge of process waters to POTW.	State or federal Storm water pollution prevention regulations
3053	Gaskets, packing and sealing devices Manufacturing	Inorganics, metals, VOCs	Pre-treat wastewater prior to discharge. Minimize outdoor storage and control storm water runoff.	State or federal Storm water pollution prevention regulations
5541	Gasoline Service Station	Inorganics, VOCs	Maintain area to minimize fuel contamination	NA
7992	Golf Course	Fertilizers and pesticides	Proper application of fertilizers and pesticides. Proper cleaning of equipment and disposal of chemicals.	KDHE, KAR 28-16
3423	Hand and Edge tools Manufacturing	inorganics, VOCs	Minimize outdoor storage and control storm water runoff. Pre-treat process wastewater prior to discharge to POTW	40 CFR 464 and State or federal Storm water pollution prevention regulations
1611	Highway and Street Construction	Sedimentation	Erosion and Sediment Control	KAR 28-16, KDHE

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
2813	Industrial Gases Manufacturing	NA	NA	NA
2819	Industrial Inorganic Chemicals Manufacturing	metals, solvents	Recycle chemical wastes where possible.	40 CFR 415 and State or federal Storm water pollution prevention regulations
4212	Local Trucking, without Storage	VOCs	Discharge to a POTW	State or federal Storm water pollution prevention regulations
2992	Lubricating Oils and Greases Manufacturing	Semi volatiles, VOCs	Control storm water runoff to minimize contact with product or wastes. Pre-treat wastewater prior to discharge (direct or POTW)	State or federal Storm water pollution prevention regulations
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
2011	Meat Packing Plant Manufacturing	BOD, pathogens, Oil and grease	Wastewater pretreatment and/or discharge to a POTW	40CFR 432 and State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3479	Metal Coating and Allied Services Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 433 and State or federal Storm water pollution prevention regulations
3469	Metal Stampings Manufacturing	inorganics, VOCs	Minimize outdoor storage and control storm water runoff. Pre-treat process wastewater prior to discharge to POTW	40 CFR 464 and State or federal Storm water pollution prevention regulations
3711	Motor Vehicles and Car Bodies Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
3751	Motorcycles, Bicycles, and Parts Manufacturing	NA	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 464 and State or federal Storm water pollution prevention regulations
3621	Motors and Generators Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
1542	Nonresidential Construction	Sedimentation	Erosion and Sediment Control	KAR 28–16, KDHE

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
1389	Oil and Gas Field services	Oil, Salt Water	Proper management of production wastes	KAR 28–41, 45, 40 CFR 435
2851	Paints and Allied Products Manufacturing	Solvents and other VOCs, metals	Discharge process water to POTW. Recycle where possible and manage solid waste properly	40 CFR 446 and State or federal Storm water pollution prevention regulations
5171	Petroleum Bulk Stations and Terminals (Truck Farm)	Inorganics, VOCs	Maintain secondary containment for fuel storage and fueling areas. Maintain and inspect. Effect repairs promptly	State or federal Storm water pollution prevention regulations
7384	Photofinishing Laboratory	NA	Discharge to POTW. Recycle chemicals	CFR 40 459
4789	Pipeline Terminal	Inorganics, VOCs	Maintain secondary containment for fuel storage and fueling areas. Maintain and inspect. Effect repairs promptly	NA
3089	Plastics products Manufacturing	inorganics, VOCs	Pre-treat wastewater prior to discharge. Minimize outdoor storage and control storm water runoff.	40 CFR 463 and State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3471	Plating and Polishing Manufacturing	Inorganics, metals, VOCs and metal etch	Minimize outdoor storage and control storm water runoff. Pre-treat process wastewater prior to discharge to POTW	40 CFR 413 and State or federal Storm water pollution prevention regulations
2842	Polishes and Sanitation goods Manufacturing	VOCs	Discharge process water to POTW	State or federal Storm water pollution prevention regulations
2452	Prefabricated Wood Buildings Manufacturing	TSS	Discharge of process waters to POTW. Minimize outdoor storage.	State or federal Storm water pollution prevention regulations
3585	Refrigeration and Heating Equipment Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
5093	Scrap and Waste Materials	Metals, TSS	Minimize contact with storm water	State or federal Storm water pollution prevention regulations
3444	Sheet Metal Work Manufacturing	Metals and TSS, VOCs and metal etch	Minimize outdoor storage and control storm water runoff. Pre-treat process wastewater prior to discharge to POTW	40 CFR 464 and State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 459 and State or federal Storm water pollution prevention regulations
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	Proper cleaning and disposal of household hazardous waste. Proper storage, application, and clean up of pesticides and fertilizers	KAR 28-48, KDHE, KDEM
7032	Sporting and Recreational Camps	sanitary, fertilizers, pesticides	Discharge to POTW. Minimize use of lawn chemicals	KAR 28-5
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA
2448	Wood Pallets and Skids Manufacturing	TSS, VOCs	Discharge of process waters to POTW. Minimize outdoor storage.	State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
1795	Wrecking and Demolition Work, Construction Demolition Landfill	TSS, could contain metals	Erosion control and proper waste management, Proper cover and runoff containment for the fill area	40CFR Part 122 Storm Water Construction Permitting and KDHE Storm Water Pollution Prevention Rules, 40 CFR 445 and Solid Waste Permitting rules, Storm Water Permitting rules
752	Animal Specialty Services	Sanitary, fertilizers	Collect and treat wastes.	NA
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
2752	Commercial Printing–Lithographic	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
241	Dairy Farms	Sanitary, fertilizers	Collect and treat process wastes. Use good erosion control practices. Minimize storm water contact with contaminants.	40 CFR 405
4221	Farm Product Warehousing and Storage	TSS, VOCs	Keep the area clean of grain. Use grease traps.	State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
5083	Farm and Garden Machinery	inorganics	Discharge to POTW	NA
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
3299	Nonmetallic Mineral Products NEC	Minerals and TSS	Protect outdoor storage to minimize contact with storm water	40 CFR 436 and State or federal Storm water pollution prevention regulations
7948	Racing, Including Track Operation	NA	Discharge to POTW. Minimize use of lawn chemicals. Use good erosion control practices	NA
5012	Recreational vehicle sales and repair	Inorganics	Discharge to a POTW. Store oils and lubricants properly	NA
5561	Recreational vehicle sales and repair	Inorganics	Discharge to a POTW. Store oils and lubricants properly	Discharge to a POTW. Store oils and lubricants properly

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
4953	Refuse Systems	ALL	Store wastes properly in order to minimize contact with storm water.	Maintain the lagoon or storage vessel properly. Control storm water run on and runoff to minimize contamination of storm water
7699	Repair Services, Nec	inorganics	Discharge to POTW	NA

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**
Diversion Id's: **0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, 0E8**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:48**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**

Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	Yes	1	1	1	1	1	1
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	Yes	1	1	1	1	1	1
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	Yes	1	1	1	1	1	1
8	Is a class V UIC well present?	Yes	1	1	1	1	1	1
9	Are any commercial, industrial, or urban areas present in Zone B?	Yes	1	1	1	1	1	1
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	No	0	0	0	0	0	0
14	Do all farmsteads have a water quality protection plan?	Yes	0	0	0	0	0	0
15	Is there grazing livestock in Zone B?	No	0	0	0	0	0	0
16	Have all livestock producers implemented water quality protection measures?	Yes	0	0	0	0	0	0
17	Is there livestock confinement in Zone B?	No	0	0	0	0	0	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	Yes	0	0	0	0	0	0
19	Is there corn or grain sorghum production in Zone B?	No	0	0	0	0	0	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
21	Are any orchards present in Zone B?	Yes	0	0	1	0	1	0
22	Are orchard nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	Yes	1	1	1	1	1	1
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	Yes	1	1	1	1	1	1
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
33	Is there livestock confinement in Zone C?	No	0	0	0	0	0	0
34	Is each confined livestock facility registered with KDHE?	Yes	0	0	0	0	0	0
35	Do all the livestock producers have water quality protection measures in place?	Yes	0	0	0	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**
Diversion Id's: **0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, 0E8**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:48**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**
Diversion Id's: **0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, OE8**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:48**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
dry cleaners	9001686	Cleaning solvents are notorious water polluters. Big Arkansas River does not act as a hydrological barrier in Wichita.	Jerry Blain
former landfill area	9001685	Site of pre-1950 landfill that stretched along river from current athletic park site to north of Central avenue.	Jerry Blain
garden center/greenhouse	9001684	On-site storage of lawn and garden chemicals.	Jerry Blain
gas station	9001683	Underground gas tanks are within 500 feet of wellhead.	Jerry Blain
lawn care center	9001687	High maintenance lawn garden area with fertilizers pesticides stored on site.	Jerry Blain
Unknown	9000696	new	Jerry Blain

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**
Diversion Id's: **0S1, 0E1, 0E2, 0E3, 0E4, 0E5, 0E6, 0S2, 0E7, 0S3, 0S4, 0S5, 0S6, 0S7, 0S8, 0E8, 0S1, 0S5, 0S6, 0S7, 0S8, 0S9, S10, S11, 0E8**
Status: **Accepted**
Submit Date: **2003-09-15 14:23:48**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **78**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
N/A or Unknown	No groundwater contamination has been found in the area of these wells, but this area is in the heart of the City, and other contamination sites have been identified in similar areas of the City, and this area represents high risk of source water contamination	Jerry Blain

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**
Diversion Id's: **041, 042, 044, 043**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:09**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	60	52	58	48	56	46
SLS Range	Mid	Mid	Mid	Low	Mid	Low

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**
Diversion Id's: **041, 042, 044, 043**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:09**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**

Unregulated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Confined Animal Feeding Operations Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**
Diversion Id's: **041, 042, 044, 043**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:09**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
Did Not Add Any Site Sources			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**
Diversion Id's: **041, 042, 044, 043**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:09**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
0	0	0	0	0	0

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**
Diversion Id's: **041, 042, 044, 043**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:09**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological	B – Inorganic Compounds	B1 – Eutrophication – Phosphorous
B2 – Sedimentation	B* – Nitrates	C – Synthetic Organic Compounds
C* – Pesticides	D – Volatile Organic Compounds	

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
Did Not Contain Any Potential Contaminants			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**
Diversion Id's: **041, 042, 044, 043**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:09**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
No Protection Measures Listed				

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**
Diversion Id's: **041, 042, 044, 043**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:09**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**

Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	No	0	0	0	0	0	0
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	No	1	1	1	0	1	0
19	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0
24	Is there a railroad or major highway in Zone B or C?	No	0	0	0	0	0	0
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	No	0	0	0	0	0	0
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	No	0	0	0	0	0	0
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
33	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
34	Is each confined livestock facility registered with KDHE?	No	1	1	1	0	1	0
35	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**
Diversion Id's: **041, 042, 044, 043**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:09**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**
Diversion Id's: **041, 042, 044, 043**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:09**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Did Not Receive Any Comments			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**
Diversion Id's: **041, 042, 044, 043**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:09**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **79**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**
Diversion Id's: **026**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:31**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	54	45	53	40	51	38
SLS Range	Mid	Low	Mid	Low	Low	Low

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**
Diversion Id's: **026**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:31**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**

Unregulated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2002251	Wendling Farms	A-LAHV-B005	C
2002601	Morris, Jerry P.	A-LAHV-H001	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Identified Contaminated Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**
Diversion Id's: **026**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:31**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
Did Not Add Any Site Sources			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**
Diversion Id's: **026**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:31**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
0	0	0	0	0	0

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**
Diversion Id's: **026**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:31**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological	B – Inorganic Compounds	B1 – Eutrophication – Phosphorous
B2 – Sedimentation	B* – Nitrates	C – Synthetic Organic Compounds
C* – Pesticides	D – Volatile Organic Compounds	

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
Did Not Contain Any Potential Contaminants			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**
Diversion Id's: **026**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:31**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
No Protection Measures Listed				

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**
Diversion Id's: **026**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:31**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**

Ground Water Single Well Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is the well under the influence of surface water?	No	0	0	0	0	0	0
2	Does the well meet KS water well construction standards?	Yes	0	0	0	0	0	0
3	Is the depth of the well less than 30 feet?	No	0	0	0	0	0	0
4	Are there unplugged, abandoned water wells present in Zone A?	No	0	0	0	0	0	0
5	Is there gravel pack within 20 feet of the surface?	No	0	0	0	0	0	0
6	Does a PWS own or control Zone A?	No	1	1	1	1	1	1
7	Does Zone A consist entirely of native grass?	No	1	1	1	1	1	1
8	Is there a contaminated well in the Zone A?	No	0	0	0	0	0	0
9	Is a class V UIC well present?	No	0	0	0	0	0	0
10	Are any commercial, industrial, or urban areas present in Zone B?	No	0	0	0	0	0	0
11	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
12	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
13	Do all the non-farm home sites have a water quality protection plan?	Yes	0	0	0	0	0	0
14	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
15	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
16	Does Zone B consist entirely of native grass?	No	1	1	1	1	1	1
17	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0

No.	Question	Response	A	B	B*	C	C*	D
18	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
19	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0
20	Is each confined animal feeding operation registered with KDHE?	No	1	1	1	0	1	0
21	Is there corn or grain sorghum production in Zone B?	Yes	0	0	1	0	1	0
22	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	No	0	0	1	0	1	0
23	Are any orchards present in Zone B?	No	0	0	0	0	0	0
24	Are orchard nutrient and pesticide plans in use for each site?	Yes	0	0	0	0	0	0
25	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0
26	Is there a railroad or major highway in Zone B or C?	No	0	0	0	0	0	0
27	Is there oil production in Zone B or C?	No	0	0	0	0	0	0
28	Do coarse textured soils predominate Zones A, B and C?	Yes	1	1	1	1	1	1
29	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
30	Is a wastewater treatment facility in Zone B or C?	No	0	0	0	0	0	0
31	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
32	Are there unplugged, abandoned water wells present in Zone B or C?	Yes	1	0	0	0	0	0
33	Are any commercial, industrial, or urban areas present in Zone C?	No	0	0	0	0	0	0
34	Are water quality protection plans in use for each site/area?	Yes	0	0	0	0	0	0
35	Is there livestock confinement in Zone C?	Yes	1	1	1	1	1	0
36	Is each confined livestock facility registered with KDHE?	No	1	1	1	0	1	0
37	Do all the livestock producers have water quality protection measures in place?	No	1	0	1	0	0	0
38	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
39	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
40	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
41	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**
Diversion Id's: **026**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:31**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**
Diversion Id's: **026**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:31**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Did Not Receive Any Comments			

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**
Diversion Id's: **026**
Status: **Accepted**
Submit Date: **2003-09-15 14:24:31**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **80**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-09-15 14:25:00**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**

Susceptibility Likelihood Scores for Assessment Area

	A	B	B1	B2	C	C*	D
Susceptibility Likelihood Score – SLS	58	45	63	58	48	55	51
SLS Range	Mid	Low	Mid	Mid	Low	Mid	Low

A – Microbiological

B2 – Sedimentation

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

B1 – Eutrophication – Phosphorous

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-09-15 14:25:00**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
201436	Farm and Garden Machinery	5083	B
205848	Repair Services, Nec	7699	B
168347	General Farm, Primarily Crop	191	C
206387	General Farm, Primarily Crop	191	C
201444	Veterinary Services, Specialties	742	C
205818	Veterinary Services, Specialties	742	C
206347	Veterinary Services, Specialties	742	C
201474	Animal Specialty Services	752	C
205780	Animal Specialty Services	752	C
205815	Animal Specialty Services	752	C
206199	Oil and Gas Field services	1389	C
167722	Nonresidential Construction	1542	C
206129	Nonresidential Construction	1542	C
171386	Prepared Feeds For Animals and Fowls	2048	C
206209	Prepared Feeds For Animals and Fowls	2048	C
206388	Prepared Feeds For Animals and Fowls	2048	C
206173	Newspapers Publishing and Printing	2711	C
206390	Newspapers Publishing and Printing	2711	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
164299	Farm Product Warehousing and Storage	4221	C
165060	Farm Product Warehousing and Storage	4221	C
205774	Farm Product Warehousing and Storage	4221	C
205809	Farm Product Warehousing and Storage	4221	C
205817	Farm Product Warehousing and Storage	4221	C
206184	Farm Product Warehousing and Storage	4221	C
206348	Farm Product Warehousing and Storage	4221	C
206372	Farm Product Warehousing and Storage	4221	C
206383	Farm Product Warehousing and Storage	4221	C
206391	Farm Product Warehousing and Storage	4221	C
201511	Refuse Systems	4953	C
164303	Farm and Garden Machinery	5083	C
206194	Farm and Garden Machinery	5083	C
206185	Gasoline Service Station	5541	C
206191	Gasoline Service Station	5541	C
206202	Gasoline Service Station	5541	C
206344	Sporting and Recreational Camps	7032	C
202285	Recreational Vehicle Parks and Campsites	7033	C
167695	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
206141	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
206400	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
164305	Auto Truck Repair Service	7538	C
201416	Auto Truck Repair Service	7538	C
202282	Auto Truck Repair Service	7538	C
202348	Auto Truck Repair Service	7538	C
205775	Auto Truck Repair Service	7538	C
206353	Auto Truck Repair Service	7538	C
206378	Auto Truck Repair Service	7538	C
165059	Car Wash	7542	C
205826	Golf Course	7992	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2000571	Bergkamp, Gilbert	A-ARRN-M001	B
2000909	May, Victor L. Farm	A-ARKM-BA13	B
2001231	Bogner Dairy	A-ARRN-M031	B
2001589	Graber Cattle	A-ARRN-BA14	B
2001667	Krehbiel Farms	A-ARRN-BD01	B
2001778	W-W Cattle	A-ARKM-BA04	B
2000161	Beachy, David	A-ARRN-M018	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2000485	Sunflower Jersey's	A-ARRN-M034	C
2000501	Kaufman, Bruce	A-ARRN-M019	C
2000558	Beachy, Jacob L	A-ARRN-M045	C
2000568	Ropp, Glendon L.	A-ARRN-M035	C
2000579	Miller Dairy	A-ARRN-M023	C
2000687	Hershberger, Daniel	A-ARRN-M032	C
2000703	Beachy, Jerry C.	A-ARRN-M037	C
2000736	Beachy, Perry A.	A-ARRN-M013	C
2000837	Beachy, Daniel	A-ARRN-M007	C
2000843	Circle A Farm	A-ARRN-M021	C
2000848	Nisly, Clifford	A-ARRN-M028	C
2000854	Golden Rule Dairy	311	C
2001006	H S Beachy Jersey Farm	A-ARRN-M039	C
2001746	C.B. Hogs	A-ARRN-S016	C
2001922	Magnuson, Claire	A-ARRN-BA03	C
2002048	Bortz, Berry Carla	A-ARPR-BD01	C
2002050	Love,dale	A-ARRN-S009	C
2002318	G H Inc.	A-ARSF-BA04	C
2002329	Shrack Cattle Company	A-ARPR-B003	C
2002399	Cb Feeders	A-ARPR-B006	C
2002494	Binford Farms, Inc.	A-ARKW-BA02	C
2002614	Clark Feedlot	A-ARSF-C005	C
2002674	Griffith Of Iuka	A-ARPR-C002	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2002912	Cattlemen's, Inc.	A-ARRN-C001	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000234	Zenith Coop Grain	02838	C
3000265	Sylvia Coop, Plevna	03177	C
3001075	Ferguson Service	15602	C
3001133	Sickman Service	17487	C
3002415	Farmers Coop Elevator, Partridge	41494	C
3002568	Partridge Garage	80383	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000090	PRESTON PWS #2	C107600380	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000174	PENALOSA COOP	C204800601	C
7000188	CAIRO COOPERATIVE EQUITY EXCHANGE/ARLINGTON BRANCH	C207870179	C
7000199	CAIRO ARLINGTON SAND PIT	C207870882	C

Regulated Solid Waste Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
5000320	Northern Natural Gas Co.	0311-S	C
5000751	City of Stafford	0729-S	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6001011	KDWP – CHENEY OX. POND #3	M-AR20-NO02	B
6001012	KDWP – CHENEY(WEST SHORE)	M-AR20-NO03	B
6001013	KDWP – CHENEY(EAST SHORE)	M-AR20-NO04	B
6001014	KDWP – CHENEY STATE PARK (HEIMERMAN PT)	M-AR20-NO05	B
6001059	RENO COUNTY S.D. NO. 1	M-AR49-ND01	B
6000330	FAIRVIEW SERVICE	C-AR49-NO03	C
6000573	WILLIAMS NAT. GAS – STAFFORD COMP. STA.	I-AR84-NP01	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000986	ABBYVILLE	M-AR01-NO01	C
6001000	ARLINGTON MWTP	M-AR07-OO01	C
6001087	PARTRIDGE WWTF	M-AR70-OO01	C
6001088	PLEVNA WTF	M-AR72-NO01	C
6001094	PRESTON MWTP	M-AR74-OO01	C
6001105	STAFFORD	M-AR84-OO01	C
6001108	SYLVIA MWTP	M-AR88-NO01	C
6001109	TURON MWTF	M-AR89-OO01	C

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-09-15 14:25:00**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9001577	auto repair service	7538	A
9001578	greenhouse	0	B
9001593	greenhouse	0	B
9001594	greenhouse	0	B
9001596	greenhouse	0	B
9001601	greenhouse	0	B
9001603	greenhouse	0	B
9001646	former gas station	10009	B
9001671	Fuel, grain and feed and hay storage	10026	B
9000666	milo field	10081	B
9000665	irrigated and dryland cropland	115	B
9001446	cropland	115	B
9001672	cropland	115	B
9001673	cropland	115	B
9001604	manufacturing facility	2449	B
9001580	manufacturing facility	2511	B
9001605	manufacturing facility	2511	B
9001579	manufacturing facility	2599	B
9000669	Ag. Center Pesticide and Fertilizer Application Serv	10038	C
9001445	oil wells	1381	C

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9000668	Co-op- grain storage and ag. services	4221	C
9001682		4221	C
9000667	discharging lagoons	10075	Q

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-09-15 14:25:00**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Sedimentation	Pesticides	IOC's	SOC's	VOC's	E – P
12	13	8	44	4	27	12

A – Microbiological

B2 – Sedimentation

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

B1 – Eutrophication – Phosphorous

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-09-15 14:25:00**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological	B – Inorganic Compounds	B1 – Eutrophication – Phosphorous
B2 – Sedimentation	B* – Nitrates	C – Synthetic Organic Compounds
C* – Pesticides	D – Volatile Organic Compounds	

Potential Contaminants Listing

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D
7542	Car Wash	Inorganics, VOCs	B
"	"	"	B1
"	"	"	B2
"	"	"	D
5541	Gasoline Service Station	Inorganics, VOCs	B
"	"	"	D
7992	Golf Course	Fertilizers and pesticides	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
1542	Nonresidential Construction	Sedimentation	B2
1389	Oil and Gas Field services	Oil, Salt Water	B
"	"	"	C
7033	Recreational Vehicle Parks and Campsites	sanitary, fertilizers, pesticides	A

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7033	Recreational Vehicle Parks and Campsites	sanitary, fertilizers, pesticides	B
"	"	"	B1
"	"	"	B*
"	"	"	C*
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
752	Animal Specialty Services	Sanitary, fertilizers	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
4221	Farm Product Warehousing and Storage	TSS, VOCs	B
"	"	"	D
5083	Farm and Garden Machinery	inorganics	B
191	General Farm, Primarily Crop	fertilizers, Pesticides	B
"	"	"	B1
"	"	"	B2

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
191	General Farm, Primarily Crop	fertilizers, Pesticides	B*
"	"	"	C*
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
2048	Prepared Feeds For Animals and Fowls	Sanitary, Nitrates, phosphorous and pesticides	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
4953	Refuse Systems	ALL	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
"	"	"	C*
"	"	"	D

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7699	Repair Services, Nec	inorganics	B

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-09-15 14:25:00**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and
7542	Car Wash	Inorganics, VOCs	Install and maintain sediment and grease traps where appropriate	40 CFR 442
5541	Gasoline Service Station	Inorganics, VOCs	Maintain area to minimize fuel contamination	NA
7992	Golf Course	Fertilizers and pesticides	Proper application of fertilizers and pesticides. Proper cleaning of equipment and disposal of chemicals.	KDHE, KAR 28-16
1542	Nonresidential Construction	Sedimentation	Erosion and Sediment Control	KAR 28-16, KDHE
1389	Oil and Gas Field services	Oil, Salt Water	Proper management of production wastes	KAR 28-41, 45, 40 CFR 435

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7033	Recreational Vehicle Parks and Campsites	sanitary, fertilizers, pesticides	Discharge to POTW. Minimize use of lawn chemicals	NA
7032	Sporting and Recreational Camps	sanitary, fertilizers, pesticides	Discharge to POTW. Minimize use of lawn chemicals	KAR 28-5
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA
752	Animal Specialty Services	Sanitary, fertilizers	Collect and treat wastes.	NA
4221	Farm Product Warehousing and Storage	TSS, VOCs	Keep the area clean of grain. Use grease traps.	State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
5083	Farm and Garden Machinery	inorganics	Discharge to POTW	NA
191	General Farm, Primarily Crop	fertilizers, Pesticides	Maintain good erosion control practices and minimize the use of chemicals	NA
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
2048	Prepared Feeds For Animals and Fowls	Sanitary, Nitrates, phosphorous and pesticides	Maintain animal feeding areas and feed storage areas to minimize contact with storm water. Collect and treat process wastes.	40 CFR 412 and State or federal Storm water pollution prevention regulations
4953	Refuse Systems	ALL	Store wastes properly in order to minimize contact with storm water.	Maintain the lagoon or storage vessel properly. Control storm water run on and runoff to minimize contamination of storm water
7699	Repair Services, Nec	inorganics	Discharge to POTW	NA

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-09-15 14:25:00**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**

Surface Water Single Well Analysis

A – Microbiological **B** – Inorganic Compounds

B1 – Eutrophication – Phosphorous

B2 – Sedimentation **C** – Synthetic Organic Compounds

C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B1	B2	C	C*	D
1	Is the intake located at a treatment plant?	No	1	1	0	0	1	1	1
2	Is there an open channel conveyance from the intake to the treatment plant?	No	0	0	0	0	0	0	0
3	Does a PWS own or control the conveyance right-of-way?	Yes	0	0	0	0	0	0	0
4	Does a PWS own or control the area within 1/4 mile of intake?	No	1	1	0	0	1	1	1
5	Is the area within 1/4 mile of the intake entirely native grass?	No	1	1	0	0	1	1	1
6	Is transportation infrastructure in close proximity to the intake?	No	0	0	0	0	0	0	0
7	Are there water quality protection plans for the transportation infrastructure?	Yes	0	0	0	0	0	0	0
8	Are any commercial, industrial, or urban areas present?	Yes	1	1	0	0	1	1	1
9	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	0	0	1	1	1
10	Is riparian area vegetated?	Yes	0	0	0	0	0	0	0
11	Has riparian area been farmed up to the stream/riverbank?	Yes	0	0	0	0	0	1	0
12	Is there a lack of native grass or trees?	Yes	0	0	0	0	0	0	0
13	Is livestock use present in riparian area?	Yes	1	0	0	0	0	1	0
14	Are any confined livestock production sites in riparian area?	Yes	1	0	0	0	0	1	0
15	Is each confinement area registered with KDHE?	No	1	0	0	0	0	1	0
16	Are any row crops (corn, milo, soybean) present?	Yes	0	0	0	0	0	1	0
17	Are water quality protection plans in use for each cropland?	No	0	0	0	0	0	1	1

No.	Question	Response	A	B	B1	B2	C	C*	D
18	Are any orchards present?	No	0	0	0	0	0	0	0
19	Are water quality protection plans in use for each orchard?	Yes	0	0	0	0	0	0	0
20	Is the intake a river intake?	No	0	0	0	0	0	0	0
21	Is the intake at a city-owned lake?	No	1	1	1	1	1	1	1
22	Is there water quality monitoring conducted at the river or lake?	Yes	0	0	0	0	0	0	0
23	Is TMDL needed for any of the rivers or lakes?	Yes	1	1	1	1	1	1	1
24	Are TMDL pollutants of concern reported by monitoring?	Yes	0	0	0	0	0	0	0
25	Are any point source discharges within 16 miles upstream of intake?	Yes	1	1	1	1	1	0	1
26	Is pretreatment required at any of the point sources?	Yes	1	1	1	1	1	0	1
27	Are all riparian buffers vegetated?	No	1	1	1	1	0	1	0
28	Are vegetated riparian buffer and a water quality protection plans in place?	Yes	0	0	0	0	0	0	0
29	Is there urbanized land within riparian buffer?	No	0	0	0	0	0	0	0
30	Is a NPDES stormwater permit required for the urbanized areas?	No	1	1	1	1	1	1	1
31	Are voluntary water quality protection plans in place for each urbanized area?	Yes	0	0	0	0	0	0	0
32	Is there industrial land use within riparian buffer?	No	0	0	0	0	0	0	0
33	Is NPDES stormwater permit required for industrial areas?	No	1	1	1	1	1	1	1
34	Are voluntary water quality protection plans in place for each industrial area?	Yes	0	0	0	0	0	0	0
35	Are there livestock present?	Yes	1	0	1	0	0	1	0
36	Is there livestock confinement present?	Yes	1	0	1	0	0	1	0
37	Is each confined livestock facility registered with KDHE?	No	1	0	1	0	0	1	0
38	Are any row crops (corn, milo, soybeans) present?	Yes	0	0	1	1	0	1	0
39	Are water quality protection plans in use for each row crop production?	No	0	0	1	1	0	1	0
40	Are any orchards present?	No	0	0	0	0	0	0	0
41	Are water quality protection plans in use for each orchard?	Yes	0	0	0	0	0	0	0
42	Is there any small grain (wheat, oats, barley) production?	Yes	0	0	1	1	0	1	0
43	Are water quality protection plans in use for each small grain production?	No	0	0	1	1	0	1	0
44	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0	0
45	Is a general watershed water quality protection plan in use?	Yes	0	0	0	0	0	0	0
46	Are any point source discharges within 16 miles upstream of intake?	Yes	0	0	0	0	0	0	0
47	Is pretreatment required at any of the point sources?	Yes	1	1	1	1	1	0	1

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-09-15 14:25:00**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**

Comments for Unregulated Sites

Potential Contaminant Site No.	Site Comments	Author
202348	This Repair Shop has closed and is no longer n business.	Douglas Helmke

Comments for Regulated Confined Animal Feeding Operations Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
W-W Cattle	2001778		Diana DeWitt

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Ferguson Service	3001075	The site is closed from a diesel spill in 1995. No groundwater contamination was suspected.	Nicole Fisher

Comments for Regulated Leaking Storage Tank Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Zenith Coop Grain	3000234	The site is currently being monitored from a 1990 diesel fuel leak. For more information contact Scott Nightingale (785) 296-1666	Nicole Fisher

Comments for Regulated Identified Contaminated Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
PRESTON PWS #2	7000090	Elevated levels of ammonia, nitrate, metalochlor, and alachlor were detected in the soil, groundwater, and PWS. For more information please contact Dave Walsh at (785) 296-1676.	Nicole Fisher

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
ABBYVILLE	6000986	This facility uses non-discharging lagoons.	Nicole Fisher
KDWP – CHENEY(WEST SHORE)	6001012		Diana DeWitt
PRESTON MWTP	6001094	This facility frequently discharges with occasionally having elevated nitrogen levels. The water gets discharged into the North Fork Ninnescah River by Silver Creek.	Nicole Fisher

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-09-15 14:25:00**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Ag. Center Pesticide and Fertilizer Application Servic	9000669	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
Co-op- grain storage and ag. services	9000668	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
Fuel, grain and feed and hay storage	9001671	This site could contaminate the public water supply.	Nicole Fisher
auto repair service	9001577	Full service auto repair service	Peggy Holloway
cropland	9001446	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001672	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001673	This site could contaminate the public water supply.	Nicole Fisher
discharging lagoons	9000667	This information was obtained from the Wellhead Protection Plan.	David Vagts
former gas station	9001646	Former gas station and mill with underground storage tanks stacked on the ground and possibly other contaminates on site.	Peggy Holloway
greenhouse	9001578	Greenhouse with large inventory of Chemicals such as fertilizer	Peggy Holloway

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
greenhouse	9001593	Greenhouse with large quantity of fertilizer and other chemicals	Peggy Holloway
greenhouse	9001594	Greenhouse with large quantity of fertilizer and other chemicals	Peggy Holloway
greenhouse	9001596	Greenhouse with large inventory of chemicals	Peggy Holloway
greenhouse	9001601	large greenhouse with chemical storage	Peggy Holloway
greenhouse	9001603	Greenhouse with large amount of stored chemicals	Peggy Holloway
irrigated and dryland cropland	9000665	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
manufacturing facility	9001579	Manufacturer of Windows and doors	Peggy Holloway
manufacturing facility	9001580	Manufacturing of Wood products in Zone B	Peggy Holloway
manufacturing facility	9001604	Manufacturing plant with potential for groundwater contamination	Peggy Holloway
manufacturing facility	9001605	Furniture manufacturing with potential contamination	Peggy Holloway
milo field	9000666	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
oil wells	9001445	This site could contaminate the public water supply.	Nicole Fisher

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Unknown	9001682	Grain elevator with potential for groundwater contamination	Peggy Holloway

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-09-15 14:25:00**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **WICHITA, CITY OF**
Assessment Area: **81**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
N/A or Unknown	A watershed protection plan is in place for the watershed, and a voluntary program to install BMPs is in place. Over 2100 projects have been completed	Jerry Blain